

Appl. No. 10/053,525

Brief of Appellant

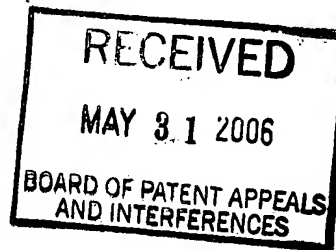
Brief following Notice of Appeal dated 24 March 2006

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**IN THE UNITED STATES PATENT AND TRADEMARK
OFFICE BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Appl. No. : 10/053,525
Appellant(s) : STARING, Aemilianus, et al.
Filed : 13 November 2001
Title : ELECTROLUMINESCENT DEVICE
COMPRISING A TRANSPARENT
STRUCTURED ELECTRODE LAYER
MADE FROM A CONDUCTIVE
POLYMER

TC/A.U. : 2878
Examiner : PATEL, Ashok
Atty. Docket : PHN 14,989R



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APPELLANT'S APPEAL BRIEF

Board of Patent Appeals and Interferences
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P.O. Box 1450
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Sir:

This Brief of Appellant follows a Notice of Appeal dated 24 March 2006, appealing the decision dated 22 December 2005 of the Examiner finally rejecting claims 1-3 of this reissue application.

All requisite fees set forth in 37 CFR 1.17(c) for this Brief are hereby authorized to be charged to Deposit Account No. 501,850.

REAL PARTY IN INTEREST

The real party in interest in this appeal is the assignee of all rights in and to the subject application, Koninklijke Philips Electronics, N.V. of The Netherlands.

RELATED APPEALS AND INTERFERENCES

To the best of the knowledge of the undersigned, no other appeals or interferences are known to Appellants, Appellants' legal representatives, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

Original claims 1-3 remain in this reissue application. Claims 1 and 2 remain in their original, unamended form, and claim 3 has been amended. Claims 1-3 now stand finally rejected as set forth in the final Office Action dated 22 December 2005, and are the subject of this appeal.

STATUS OF AMENDMENTS

No amendments were made in response to the Final Office action. All amendments have been entered.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The invention relates to an electroluminescent device comprising an active layer made from a semiconductive conjugated polymer, which layer is situated between a first and a second electrode layer of which at least the first electrode layer is transparent to the light to be emitted and comprises an electroconductive polymer which is suitable for injecting holes into the active layer. (specification, page 1, lines 1-5)

More specifically, the invention is embodied in an electroluminescent device (1) comprising an active layer (7) made from a semiconducting conjugated polymer selected from the group consisting of poly (3-alkylthiophene) and poly (p-phenylene vinylene) polymers, which layer (7) is situated between a first (5) and a second (9) electrode layer of which at least the first layer (5) is transparent to the light to be emitted and comprises an electroconductive polymer which is suitable for injecting holes into the active layer (7), characterized in that the electroconductive polymer is poly-3,4-ethylenedioxythiophene. (Specification: page 1, lines 1-5; page 3, lines 16, 17 and 20-22; Claim 1; Figs. 1 and 2)

In a preferred embodiment, the conjugated polymer is soluble. (Specification: page 3, lines 22 and 23; Claim 2)

In another embodiment, an electroluminescent device (1) comprises an active layer (7) made from a semiconducting conjugated soluble polymer, which layer (7) is situated between a first (5) and a second (9) electrode layer of which at least the first layer (5) is transparent to the light to be emitted and comprises an electroconductive polymer which is suitable for injecting holes into the active layer (7), characterized in that the electroconductive polymer is poly-3,4-

ethylenedioxythiophene. (Specification: page 1, lines 1-5; page 3, lines 16 and 17; Claim 3; Figs. 1 and 2)

GROUND(S) OF REJECTION TO BE REVIEWED ON APPEAL

The grounds of rejection to be reviewed on appeal are:

1. Claims 1-3 are rejected under 35 USC 251 as being an improper recapture of broadened claimed subject matter surrendered during prosecution of the original application; and
2. Claims 1-3 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of parent patent 5,705,888.

ARGUMENT

1. Are claims 1-3 an improper recapture of broadened claimed subject matter surrendered during prosecution of the original application?

Claims 1-3 are rejected under 35 USC 251 as being an improper recapture of broadened claimed subject matter surrendered during prosecution of the original application 08/891,611, issued as patent 5,986,400, upon which this reissue application is based.

Specifically, the limitation 'active layer made from a semiconducting conjugated soluble polymer' of claim 3 of this reissue application is said to be broader than cancelled claims 4 and 5 of the original application 08/891,611, and also broader than claim 1 of the original patent 5,986,400.

Regarding claim 1 of the patent (claim 13 of the original application), the limitation 'active layer made from a semiconducting conjugated polymer selected from poly (3-alkylthiophene) and poly (p-phenylene vinylene) polymers', in combination with other elements of the device, is said by the Examiner to render the claim patentable over the prior art, so that the narrow scope of the claims of the patent was not an error within the meaning of Section 251, and the broader scope surrendered in the application cannot be recaptured here.

MPEP Section 1412.02 defines a three-step test for determining whether a recapture took place. The first step is to determine whether the scope of the claim was broadened. Applicant concedes such broadening of scope. The second step is to determine whether any broadening aspect of the claims relates to surrendered subject matter. This step involves two sub-steps. As stated in the MPEP Section 1412.02(1)(B)(1)(A):

It must first be determined whether there was any surrender of subject matter made in the prosecution of the original application which became the patent to be reissued. If an original patent claim limitation now being omitted or broadened in the present reissue application was originally relied upon by applicant in the original application to make the claims allowable over the art, the omitted limitation relates to subject matter previously surrendered by applicant. The reliance by applicant to define the original patent claims over the art can be by way of presentation of new/amended claims to define over the art, or an argument/statement by applicant that a limitation of the claim(s) defines over the art. To determine whether such reliance occurred, the examiner must review the prosecution history of the original application file (of the patent to be reissued) for recapture. The prosecution history includes the rejections and applicant's arguments made therein. If there was no surrender of subject matter made in the prosecution of the original application, again the analysis ends and there is no recapture. (emphasis added)

Thus, under this section of the MPEP, reliance by an applicant to define claims over the prior art can be shown by way of 'presentation of new/amended claims to define over the art'.

In this case, claim 1 of the original patent (claim 13 of the original application) was rejected under 35 USC

103(a) over Gustafsson et al. (Nature) in view of Gustafsson et al. (Solid State Ionics). Both of these references were applied to show that the material of the polymer electrode layer, not the active layer, was unpatentable (Office action dated 22 September 1998, page 4).

However, the limitation 'active layer made from a semiconducting conjugated polymer selected from poly (3-alkylthiophene) and poly (p-phenylene vinylene) polymers', which was inserted into claim 13 of the original application in the response dated 17 December 1998, related to the active layer, not the polymer electrode layer.

Thus, the limitation was not added to claim 13 in order to define patentable subject matter over the prior art, but merely, as pointed out in the remarks accompanying the amendment which inserted the limitation, to 'more clearly define the invention'.

MPEP Section 1412.02(1)(B)(1)(A) also states that reliance by an applicant to define claims over the prior art can be shown by way of 'argument/statement' that a limitation defines over the art. However, the arguments in the remarks were directed to distinguishing the material of the polymer electrode, not the active layer, from the references.

As discussed at page 2, lines 25-28 of Appellant's specification, Gustafsson et al. (Nature) explains that the active layer is made from a semiconductive conjugated polymer, while conductive polyaniline is the conductive layer which serves as the hole-injecting electrode.

Based on this background statement provided in the specification, Appellant made the following statement in the response of 17 December 1998: 'Gustafson et al. (Nature) does not teach or even suggest ... the use of poly-3, 4-

ethylenedioxythiophrene as the electroconductive polymer....
There is nothing in Gustafson et al. (Solid State Ionics) that would even suggest that the poly-3, 4-ethylenedioxythiophrene ... may be used to inject holes ... into ... any semiconductive conjugated polymer present in an electroluminescent device.'

Thus, it is clear that the arguments in the response were directed to the electrode layer, not the active layer, of claim 13.

Moreover, in the Office action of 15 March 1999 following the above-described amendment of claim 13, rather than applying any prior art in response to the amendment, the Examiner instead dropped the prior rejection of claim 13 under Section 103, and rejected the claims for double patenting over prior patent 5,705,888. This rejection was subsequently overcome by the filing a terminal disclaimer.

Regarding claims 4 and 5 of the original application, these claims were not cancelled in view of any prior art, but were cancelled because they had already been allowed in parent application 08/523,837, and issued in US patent 5,705,888.

In summary, neither the amendment of claim 13 nor the cancellation of claims 4 and 5 in the original application was made for or necessitated by the prior art. Accordingly, claim 3 of this reissue application is not an attempt to recapture subject matter previously given up in order to define patentable subject matter, but rather is an attempt to claim subject matter which Applicant is entitled to claim but failed to claim previously through error. This is exactly the kind of situation which a reissue patent with broadened claims is designed to remedy.

In response to the above arguments, the Examiner has merely asserted that 'the added limitation ... rendered claim 1 of (the original patent) patentable', but has not supported this assertion with any evidence from the prosecution history, as specifically required by MPEP Section 1412.02(1)(B)(1)(A). Indeed, this could not be done, since the prosecution history is devoid of any such supporting evidence. On the contrary, the prosecution history shows that the added limitation was not made to define patentable subject matter, as Appellant has just demonstrated.

Accordingly, it is urged that the rejection of claims 1-3 under 35 USC 251 as an improper recapture of previously surrendered subject matter is in error and should be reversed.

2. Are claims 1-3 unpatentable over claims 1-5 of parent patent 5,705,888?

Claims 1-3 are also rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-5 of parent patent 5,705,888.

Claim 1 of this reissue application claims an active layer selected from the group consisting of poly (3-alkylthiophene) and poly (p-phenylene vinylene) (the latter referred to as 'PPV').

Claims 4 and 5 of parent patent '888 each claim an active layer of a specific poly (p-phenylene vinylene) polymer. Claim 4 calls for conjugated 2,5-substituted poly(p-phenylene vinylene), while claim 5 calls for poly(2-methoxy,5-(3,7-dimethyloctyloxy)-p-phenylene vinylene. These compounds are derivatives of PPV, not PPV (see col. 3, lines 18 and 25-33 of the patent).

Moreover, claiming a specific PPV derivative would not suggest to the skilled artisan that it would be possible to claim PPV generally. The notorious unpredictability of the behavior of chemical compounds would serve to caution the skilled artisan against concluding that the claiming of a specific derivative of PPV for a particular purpose would indicate that PPV would also be suitable for such purpose.

Thus, claim 1 and its dependent claim 2 are not obvious over claims 1-5 of the parent patent '888.

Claim 3 calls for the semiconducting conjugated polymer to be soluble, and does not call for insulating areas in the first electrode layer.

In contrast, claims 1-5 of parent patent '888 call for patterned insulating areas in the first electrode layer, and do not call for the semiconducting conjugated polymer to be soluble.

Thus, claims 1-5 of parent patent '888 would not suggest to the skilled artisan the particular combination of elements claimed in claim 3.

Thus, claim 3 is not obvious over claims 1-5 of the '888 parent patent.

In summary, claims 1-3 are not obvious over claims 1-5 of the '888 parent patent, and it is urged that the double patenting rejection is in error and should be reversed.

CONCLUSION

In view of the foregoing, Appellant respectfully requests that the Board reverse the rejections of record, and direct the Examiner to allow all of the pending claims, and to

otherwise find the application to be in condition for allowance.

Respectfully submitted,

A handwritten signature in cursive script, reading "John C. Fox". The signature is written in dark ink and is positioned above a horizontal line.

John C. Fox, Reg. 24,975
Consulting Patent Attorney
203-329-6584

APPENDIX

CLAIMS ON APPEAL

1. An electroluminescent device comprising an active layer made from a semiconducting conjugated polymer selected from the group consisting of poly (3-alkylthiophene) and poly (p-phenylene vinylene) polymers, which layer is situated between a first and a second electrode layer of which at least the first layer is transparent to the light to be emitted and comprises an electroconductive polymer which is suitable for injecting holes into the active layer, characterized in that the electroconductive polymer is poly-3,4-ethylenedioxythiophene.

2. The electroluminescent device of claim 1 wherein the conjugated polymer is soluble.

3. An electroluminescent device comprising an active layer made from a semiconducting conjugated soluble polymer, which layer is situated between a first and a second electrode layer of which at least the first layer is transparent to the light to be emitted and comprises an electroconductive polymer which is suitable for injecting holes into the active layer, characterized in that the electroconductive polymer is poly-3,4-ethylenedioxythiophene.

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EVIDENCE APPENDIX

(none)

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RELATED PROCEEDINGS APPENDIX

(none)